

Replacement Claims for Serial No. 10/020,596

98. In a homogenous assay method for detecting in a sample a hybrid formed between a labeled polynucleotide probe and a target polynucleotide in the presence of a polycationic polymer provided to the sample in an amount sufficient to increase the rate at which the hybrid is formed, the improvement comprising providing to the sample a dissociating reagent in an amount sufficient to dissociate the polycationic polymer from the hybrid after the polynucleotide probe and the target polynucleotide have had sufficient time to associate in the sample, and detecting the hybrid in the presence of unhybridized probe after the dissociating reagent has been provided to the sample.

99. (New) The method of claim 98, wherein the probe polynucleotide and the polycationic polymer are in solution during the formation of the hybrid.

100. (New) The method of claim 98, wherein the polycationic polymer is provided to the sample before the probe polynucleotide.

101. (New) The method of claim 98, wherein the probe polynucleotide and the polycationic polymer are independently provided to the sample.

102. (New) The method of claim 98, wherein the polycationic polymer is a homopolymer.

103. (New) The method of claim 98, wherein the dissociating reagent is at least one of a polyanion and an anionic detergent.

104. (New) The method of claim 103, wherein the dissociating reagent is an anionic detergent.

105. (New) The method of claim 104, wherein the anionic detergent is lithium lauryl sulfate.

106. (New) The method of claim 98, wherein the hybrid is in solution during the detecting step.